Focus on **Reducing Engine Idling at Truck Stops**

From the Department of Ecology's Air Quality Program

About 500,000 heavy duty long-haul diesel trucks with sleeper cabs travel the United States. The drivers of these trucks are required to take safety rest periods at truck stops or rest areas everyday. Truck drivers generally leave their engines running during these rest periods to provide power for heat, air conditioning, and other systems. This engine idling burns nearly a billion gallons of diesel a year, releases significant amounts of air pollution, and increases fuel and maintenance costs to the truck owner.

Why is reducing truck engine idling important?

Diesel exhaust from engine idling contains substances that are harmful to human health. These include tiny particles known as "fine particulate matter." These particles are so small that they can be inhaled deep into the lungs, where they can cause serious health problems. Diesel exhaust also contributes to the formation of ozone air pollution, which can cause numerous respiratory health problems. Health studies have shown that diesel exhaust contributes to chronic respiratory problems such as asthma, and may cause cancer.

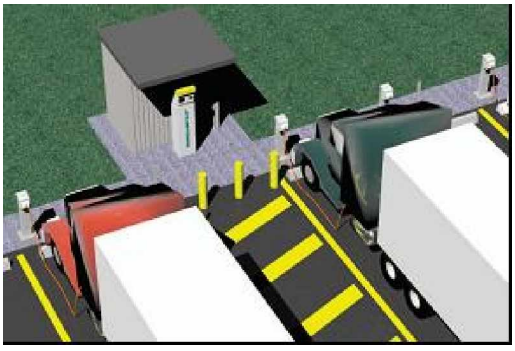
In addition to its health effects, diesel exhaust contributes to global warming and regional haze.

How will reducing truck engine idling help?

Over a period of one year, the average long-haul truck emits 20 tons of air pollution from idling alone. In addition to reducing air pollution, cutting back on idling would reduce fuel and maintenance costs for truck owners, reduce dependence on foreign oil, and even enhance the safety and comfort of the drivers by reducing vibration and noise during rest periods.

If they turn their engines off, how will truck drivers get the power they need for heat, air conditioning, and other systems?

There are other technologies that can be used to provide power. One such technology is called Truck Electrified Parking (TEP). TEP provides grid-supplied electrical power through electrical outlets mounted on pedestals at the parking space (see the photos below). Trucks can plug into these outlets at truck stops and rest areas rather than idle their engines. They will then have power to operate heating, air conditioning and other electrical appliances such as televisions, microwaves and refrigerators.



How much does TEP cost the drivers?

The cost is around a $1.00 per hour, compared to $3.00 for a gallon of diesel. Long haul trucks burn an average of one gallon of diesel per hour while idling. So for every hour that drivers use the TEP service rather than idling, they save $2.00.

Is TEP available for use now?

Not yet, but it will be soon. The states of Washington, Oregon, and California are working together to create a network of idle-free truck stops along the I-5 corridor and other corridors from Mexico to Canada. The federal Environmental Protection Agency (EPA) has awarded grants to agencies in Washington and Oregon to establish TEP at truck stops. The federal grants are being supplemented with state and private money and funds from the Climate Trust of Oregon, a non-profit organization dedicated to reducing green house gases. This money will be used to establish 75 TEP parking spaces at three truck stops in Washington, and 200 spaces at four truck stops in Oregon. Shurepower, LLC, a TEP technology provider, will install the pedestals and provide the service (visit their website at www.shurepower.com).

These parking spaces should be ready for use by the summer of 2006. At each of the TEP parking spaces, a pedestal will provide 120 volt AC electrical power. Truck drivers resting at these stops will be able to shut down their main engines and still operate on-board devices such as heaters, air conditioning, and convenience appliances including televisions, microwaves, and refrigerators. Services may also include high speed Internet, phone and cable TV services.

Where will the TEP spaces be located?

Several truck stops in Oregon and Washington have expressed interest in participating in the project. These truck stops are located along the I-5, I-90, and I-82 corridors. Final locations will depend on agreements worked out between Shurepower and the interested truck stops; however, one truck stop, the Horse Heaven Hills Travel Plaza in Prosser WA, has already signed a contract with Shurepower. Stay tuned to find out where the other truck stops will be.

Will any special on-board equipment be needed to use the TEP service?

To use TEP services, a driver will need to have at least three things:

1. A heavy-duty extension cord to plug into the system;
2. A 120 volt AC electrical heating, cooling or other electrical appliance in the cab; and
3. A Shurepower account and user card or other major credit card.

How will this project benefit Washington and Oregon residents?

If the 275 TEP parking spaces are used just 50 percent of the time, over a five-year period the benefits will include:

- Total air pollution reduced by more than 64,000 tons.
- Engine idling reduced by more than six million hours.
- Diesel fuel consumption reduced by more than six million gallons.
- Savings to truck or fleet owners of more than twelve million dollars in fuel costs.
- Greater comfort and safety for truck drivers.

What other efforts are underway to reduce diesel engine emissions?

Other projects are underway, planned or proposed for reducing emissions from diesel engines. Some of these are:

- Retrofitting school buses with emission reducing devices.
- Establishing "No Idling" zones at schools.
- Retrofitting switchyard locomotives with idle reduction devices.
- Having cruise ships plug into grid electric power when in port.
- Installing small diesel auxiliary power units on trucks in lieu of main engine idling.
- Installing diesel emission reduction devices on highway maintenance equipment.
- Using ultra-low sulfur diesel or bio-diesel.
- Establishing an equipment check-up program to improve performance and reduce emissions.
- Retrofitting government and public diesel vehicles with emission reducing devices.

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